

## REMARKS

### Interview

At the outset, Applicants wish to thank the Examiner for the telephonic interview with the undersigned agent which took place on September 12, 2006. In the interview the references cited in the Office Action (Franke *et al.* (WO 02/072206) and Platt (*Polyhedron* 12:467-472, 1993)) were discussed, and it was agreed that Applicants would amend claim 1 to include a limit on the amount of alkoxide ion present, as recited on page 16 of the instant application. The Examiner was of the opinion that such claim 1 would be allowable, subject to the results of any further searches. The undersigned proposed to add further claims based on claim 1 and drawn to additional features of the invention.

### Description

Page 2 of the description has been amended to correct inadvertent typographical errors in chemical structures. Specifically, in the structures for Sarin and Soman, an oxygen atom has been added to the left of the phosphorus atom. In the structure for Russian-VX, the substituents on the amino group were changed from di-*n*-propyl to diethyl, per the correct formula for Russian-VX. It is submitted that these amendments do not add new matter as the structures of these compounds are well known in the art; see, for example, Yang, *Acc. Chem. Res.* 32:109-115, 1999, cited on page 2 of the application, the contents of which were incorporated in the application by reference. Entry of these amendments is respectfully requested.

### Claims

By this amendment, claims 1, 9 to 11, 23, 26, 37, and 42 to 45 have been amended, claim 36 has been cancelled, and new claims 46 to 48 have been added. Claims 1 to 12, 14 to 35, 37, and 42 to 48 are in the case. Applicant has previously paid for 41 claims. A Fee Transmittal, in respect of the one additional claim resulting from the instant amendment, is attached.

Claim 1 has been amended to recite a limit on the amount of alkoxide ion present. Claims 9, 10, 11, and 37 have been amended for consistency with claim 1 and to recite various ranges of the metal ion:alkoxide ion ratio. Support for these amendments is found at, for example, page 16, 3<sup>rd</sup> paragraph of the application. Claim 23 has been amended to recite further organophosphorus compounds listed throughout the description. In particular, the compound  $(C_2H_5O)_2P(O)-S-(p\text{-nitrophenyl})$ , corresponding to O,O'-diethyl-S-p-nitrophenylphosphothioate (see, e.g., scheme 2 on page 38), has been provided in its linear formula, which shows connectivity of the molecule. Similarly, claims 26 and 42 to 45 have been amended to include linear formulae for the compounds recited therein. New claim 46 is drawn to V-agents, as recited throughout the application. New claims 47 and 48 are drawn to additional features of the invention, as recited in the application at page 11, line 5 and page 19, 3<sup>rd</sup> -last paragraph.

No new matter has been entered by these amendments and entry thereof is respectfully requested.

#### **Claim Rejections Under 35 U.S.C. §112**

Claims 26 and 42 to 45 were rejected under 35 U.S.C. § 112, second paragraph, as indefinite for reciting trade names. As amended herein, the subject claims now recite the chemical formulae for the compounds in the claims. Withdrawal of the rejection and reconsideration are respectfully requested.

#### **Claim Rejections Under 35 U.S.C. §103**

Claims 1 to 12, 14 to 37, and 42 to 45 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Franke *et al.* in view of Platt. The Examiner suggested that the claimed process for decomposing a neutral organophosphorus compound would have been suggested to one of ordinary skill because one is taught to select the processes of Franke *et al.* and Platt. Applicants respectfully traverse this rejection and request reconsideration in view of the following remarks.

As acknowledged by the Examiner, Franke *et al.* is deficient because it does not teach a process wherein lanthanide series metal ions and transition metal ions are employed. The Examiner stated that Platt teaches a reaction process in which lanthanide nitrates and

dimethylbenzoylphosphonate are reacted in methanol.

It is submitted that the combination of Franke *et al.* and Platt would not lead one of ordinary skill to the invention. As discussed in the interview on September 12, 2006, the method of Franke *et al.* employs a large amount of alkoxide ion. This is because alkoxide ion is consumed in the reaction and therefore must be present in large quantity to sustain the reaction. In contrast, the invention employs a relatively small amount of alkoxide ion. This is because in the reaction of the invention, alkoxide ion is not consumed and therefore only a small amount is required. Neither Franke *et al.* nor Platt teach or suggest use of a small amount of alkoxide ion as required by the invention.

Moreover, as discussed in the interview, use of a large amount of alkoxide ion, such as that taught by Franke *et al.*, relative to the amount of metal ion catalyst, can have a quenching effect on the catalyst, thereby rendering at least some of the metal ineffective as a catalyst, and slowing down the reaction. The invention avoids such a problem by providing the alkoxide ion in only a small amount.

Accordingly, Applicants have amended claim 1 to recite the limitation that the alkoxide ion is present "in a range from a trace amount to a metal ion:alkoxide ion ratio of 1:2", as taught at page 16 of the application. This amount of alkoxide ion is not taught or suggested by the cited references. For at least these reasons, withdrawal of the rejection and reconsideration are respectfully requested.

## **Conclusion**

The amendments herein are being made in an effort to advance prosecution of this application, and not for reasons of patentability. Applicants reserve the right to assert the original claims in this or a related application.

In view of the foregoing, Applicants submit that the claims are in condition for allowance and respectfully request same. Should the Examiner wish to discuss this Reply, he is invited to telephone the undersigned agent at (613) 533-2342.

Please charge any fees that may be required to our Deposit Account No. 17-0110.

Respectfully submitted,



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